PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR		
PPP PPP		RRR RRR RRR RRR	111 111 111	

_\$2

PLI PLI PLI PLI PLI PLI PLI PLI

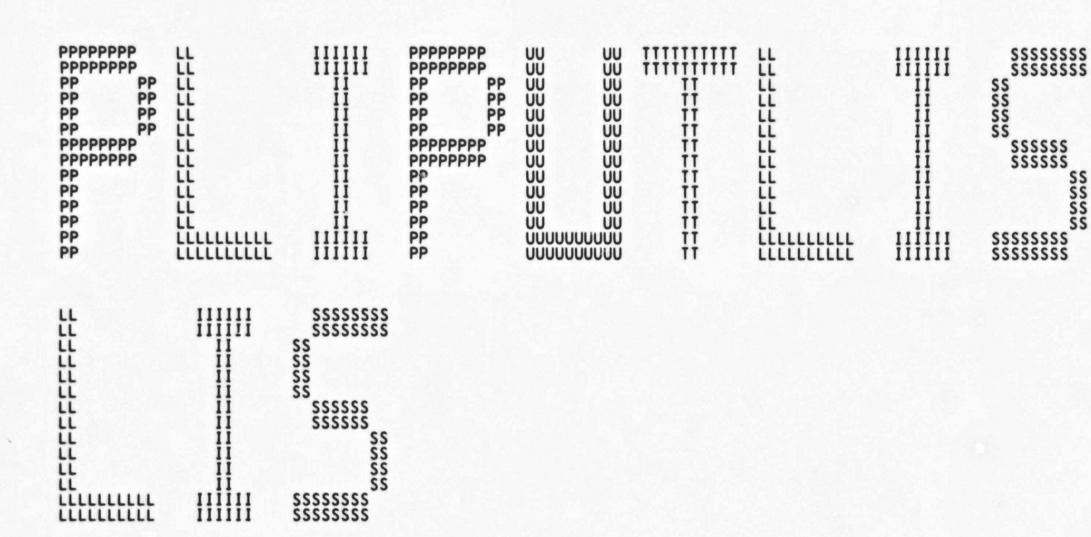
PLI PLI PLI

PLI PLI PLI PLI PLI PLI PLI

\$\$ \$\$ \$\$ \$\$

....

....



\$defdat

define operand node data types

```
.title pli$putlistitem .ident /1-002/
                                                                                                      : Edit WHM1002
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                facility:
                            VAX/VMS PL1 runtime library
                   abstract:
                            This module contains the pl1 runtime routines to put items to a pl1 stream file under list directed i/o.
                   author: c. spitz 28-nov-79
                   modified:
                            1-002 Bill Matthews 29-September-1982
                                         Invoke macros $defdat and rtshare instead of $defopr and share.
            44555555555
                   external definitions
                                                                              :define file control block :define stack frame offsets
                             $deffcb
                             $defstk
                             $defstr
                                                                              ; define stream block offsets
```

OC AC

27

07 OC AC 2727

02 50

53

00000000

52

03 00

50

```
16-SEP-1984 02:24:21 VAX/VMS Macro V04-00 Page 2
6-SEP-1984 11:39:33 [PLIRTL.SRC]PLIPUTLIS.MAR;1 (1)
```

```
Sdefgetopt
Srabdef
                   556666666667
                                                                                      ;define get options block
                                                                                      ; define rms rab offsets
                                    $rmsdef
                                                                                      ;define rms error codes
                                    $ssdef
                                                                                      :define system status codes
                          local data
                                    rtshare
                                                                         ; sharable
                  69
71
77
77
77
77
77
77
77
                       ;++
; pli$putl****
                       the pli$putl**** routines are called by the compiled code to put items to a stream output file under list directed transmission. each routine converts the source item to a character string based on the source data type, and puts then puts the string to the file by jumping to
      0000
      0000
      0000
                          converts the source item to a character string based on the source data
      0000
                       ; pli$$putnlis_r6.
      0000
      0000
      0000
      0000
      0000
                       :pli$putlchar_r6
      0000
                       ; inputs:
      0000
                                    r0 - address of element to put
      0000
                                   r1 - size/prec of element to put
r11 - address of stream block
                   84
85
      0000
      0000
                                    ap - address of file control block
                   86
87
      0000
                       ; outputs:
      0000
                                   none
      0000
                   88
                       ; side effects:
      0000
                   89
                                   r0-r6 are destroyed
      0000
      0000
                       pli$putlchar_r6::
      0000
                                                #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
r0,r1 ;get ending address of s
09E
00
00
00
00
00
90
      0004
                                    addl
                                                                                      ;get ending address of source
                   94 95 96 97
                                                <str_b_field+2>(r11),r2 :get starting addr in field
r2,r4 ;copy it
      0007
                                    movab
      000B
                                    movi
                                                str_l_fld_end(r11).r3 ;get_end addr of field
#atr_v_print,fcb_l_attr(ap).5$ ;skip lead quote if print
#^x27,(r2)+ ;insert the leading quote
      000E
0012
0017
                                    movl
                                    bbs
                   98
99
                                    movb
D1
13
91
12
E0
B0
11
      001A
                                                r0,r1
                                                                                      ;nothing in source?; if eql, then yes
                                    cmpl
      001D
                 100
                                    begl
                 101 10$:
102
103
104
105
      001F
0022
                                                #atr v print, fcb_l_attr(ap), 20$; if print file, don't change insert 2 quotes
                                    cmpb
                                    bnea
      0024
0029
002E
                                    bbs
                                    MOVW
                                    brb
90
F2
11
      0030
0033
0037
0039
                                                (r0),(r2)+
r1,r0,55$
                 106
                       20$:
                                    movb
                                                                                      ;copy to field
                                                                                      if not end of source, cont
                                    aoblss
                 108
                                    brb
                                                10$
D1
                       55$:
                                                                                      :field overflow?
                                    cmpl
      003C
003E
0045
19
                 110
                                                                                      ; if lss, then no, cont
;set field overflow
                                    blss
DÓ
31
                                                "plis_strovfl,r0
                                    movl
                                                ; and fail #atr v print, fcb_l_attr(ap),70$; if print, don't add trail quote #^x27,(r2)+ ; insert trailing quote
                                    brw
ĒÔ
                       60$:
                                    bbs
                                    movb
```

```
get length; set length in field; put in buffer
                                  C2
B0
16
CA
05
                                                                                           r4,r2 ;get length r2,-(r4) ;set length in field g^pli$$putnlis_r6 ;put in buffer #atr_m_recur,fcb_l_attr(ap) ;clr recursion flag
         52 54
74 52
00000000 GF
                                                       115 70$:
                                                                             subl
                                                       116
                                                                             MOVW
                                                                            jsb
           OC AC
                                          0060
0061
                                                                             rsb
                                                       12012345678901233456789
                                                              ;pli$putlvcha_r6
                                                                       inputs:
                                                                            r0 - address of element to put
r1 - size/prec of element to put
r11 - address of stream block
ap - address of file control block
                                                                       outputs:
                                                                            none
                                                                       side effects:
                                                                            r0-r6 are destroyed
                                                              pli$putlycha_r6::
                                                                            bisl #atr_m_recur,fcb_l_attr(ap) ; set recursion flag movzwl (r0)+,r1 ; get length of source
          OC AC
                     08
80
FF95
                                  C8
30
31
                                          0065
                                                                                           pli$putlchar_r6
                                                                             brw
                                                                                                                                        :continue in common
                                          006B
                                                       140
141
142
143
144
145
                                          006B
                                                              :pli$putlbit_r6
                                          006B
                                                                       inputs:
                                                                            r0 - address of element to put
r1 - size/prec of element to put
                                          006B
                                          006B
                                                                            r2 - offset to starting bit
r11 - address of stream block
ap - address of file control block
                                          006B
                                          006B
                                          006B
                                                       006B
006B
                                                                       outputs:
                                                                            none
                                          006B
                                                                       side effects:
                                          006B
                                                                            r0-r6 are destroyed
                                          006B
                                          006B
                                          006B
006F
0072
0076
007A
007D
0087
0087
0097
0093
0093
00AD
                                                              pli$putlbit_r6::
                                                                                           #atr_m_recur.fcb_l_attr(ap) ;set recursion flag
r2,r5 ;copy offset
          OC AC
                                  C809E19001503108F16A5
                                                                                                                                        copy offset
                                                                             movl
                                                                                          str_b_field(r11),r2
r1,#3,(r2)+
#^x27,(r2)+
r1,r3
r3,#1000
           52
                    18
                                                                                                                                        get field addr
                                                                             movab
                                                                             addw3
                                                                                                                                        ; set size
                                                                             movb
                                                                                                                                        ; insert a quote
                                                                                                                                        get size
field overflow?
                                                                             movl
000003E8 8F
                                                                             cmpl
                                                                                                                                       ; if leg, then no
;set field over flow
;and fail
                                                                             bleg
                                                                                           #plis_strovfl,r0
         00000000'8F
                                                                             movl
                                                                                          fail ;and fail
r1,r2,r4 ;get addr of end of stri
#^x4227,(r4) ;plug in trailing quote
#0,g^pli$bitchar_r6 ;convert bits
g^pli$$putnlis_r6 ;put in buffer
#atr_m_recur,fcb_l_attr(ap) ;clr recursion flag
;return
                     00C8
51
7 8F
00
                                                                             prw
                52
4227
                                                                                                                                        get addr of end of string ;plug in trailing quote and B
                                                                             addl3
                                                                             MOVW
00000000 GF 00
                                                                             calls
                                                                             jsb
                                                                             bicl
                                                                             rsb
                                          00AE
```

```
;pli$putlabit_r6
                               OOAE
                                                     inputs:
                               OOAE
                                                         r0 - address of element to put
                               OOAE
                                                         r1 - size/prec of element to put
                               OOAE
                                                         r11 - address of stream block ap - address of file control block
                               OOAE
                               OOAE
                                                     outputs:
                               OOAE
                                                         none
                               OOAE
                                                     side effects:
                                OOAE
                                         181
                                                         r0-r6 are destroyed
                               OOAE
                                              pli$putlabit_r6::
                         C8
D4
11
        OC AC
                                                         bist
                                                                    #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
                                         186
                                                                                                     ;set offset to 0
                                                         clrl
                               00B4
                                                         brb
                                                                    pli$putlbit_r6
                                                                                                     : join common code
                                00B6
                                00B6
                                              :pli$putlfixb_r6
                                         190
191
                               00B6
                                                     inputs:
                               00B6
                                                         r0 - address of element to put
                                         192
                               00B6
                                                         r1 - size/prec of element to put
                               0086
                                                         r11 - address of stream block
                                         194
195
                               00B6
                                                         ap - address of file control block
                               00B6
                                                     outputs:
                                         196
197
198
199
                               00B6
                                                         none
                               00B6
                                                     side effects:
                               00B6
                                                         r0-r6 are destroyed
                               00B6
                               00B6
                                         pli$putlfixb_r6::
                               00B6
                               00B6
00BA
00BE
00C5
00CC
                                                                    #atr m_recur.fcb_l_attr(ap) ;set recursion flag
str b_field(r11),r2 ;set field addr
#1000,r3 ;set size
        0C AC 08
52 18 AB
                         08
9E
00
                                                         bist
                                                         movab
      000003E8
                                                         movl
                                                                    #0,g^pli$fixbvcha_r6 ;convert it
g^pli$$putnlis_r6 ;put in buffer
#atr_m_recur,fcb_l_attr(ap) ;clr recursion flag
00000000 GF
                         FB
16
                   00
                                                         calls
      00000000 GF
                                                         jsb
                         CA
05
       OC AC
                                                         rsb
                                                                                                     :return
                               00D7
                               00D7
00D7
                                              :pli$putlfixd_r6
                                                     inputs:
                                                         r0 - address of element to put
                                                         r1 - size/prec of element to put
                                                         r11 - address of stream block ap - address of file control block
                                                     outputs:
                                                         none
                                                     side effects:
                                                         r0-r6 are destroyed
                              00D7
00D7
00D7
00D7
00D8
                                              pli$putlfixd_r6::
                                                                    #atr m_recur.fcb_l_attr(ap) ;set recursion flag
str b_field(r11),r2 ;set field addr
#1000.r3 ;set size
      0C AC
52 18
000003E8
                         08
9E
00
                                                         bisl
                  AB
8F
00
                                                         movab
                               00DF
00E6
00ED
                                                         movl
                                                                    #0.g^pli$fixdvcha_r6
g^pli$$putnlis_r6
00000000 GF
                          FB
16
                                                         calls
                                                                                                     ; convert it
      00000000 GF
                                                         jsb
                                                                                                     :put in buffer
```

ap - address of file control block

outputs: none side effects:

013A 013A 013A 013A

```
013A
013A
013A
013B
0149
0156A
015B
0169
0171
0171
                                                                                           r0-r6 are destroyed
                                                                         pli$putlpic_r6::
                                                                                                            #atr m_recur,fcb_l_attr(ap) ;set recursion flag
str_b_field(r11),r2 ;set field addr
#1000,r3 ;set size
#0,g^pli$picvcha_r6 ;convert it
g^pli$$putnlis_r6 ;put in buffer
#atr_m_recur,fcb_l_attr(ap) ;clr recursion flag
0C AC 08
52 18 AB
53 000003E8 8F
000000000'GF 00
00000000'GF
                                         C8 9E 0 F 1 6 A 0 5
                                                                                            movab
                                                                                           movl
                                                                                           calls
jsb
bicl
                                                                                                                                                                 :return
                                                                                           rsb
08 AC 50
5C
50
00000000'8F
00000000'GF 03
                                                                                                            rO,fcb_l_error(ap)
                                                                                                                                                                ;set error in fcb
;set fcb address
                                         DDDDDB4
                                                                          fail:
                                                                                           movl
                                                                                           pushl
                                                                                                            ap
                                                                                                                                                                 set error code; set error condition
                                                                                            pushl
                                                                                                             #pli$_error
#3,g^pli$io_error
                                                                                            pushl
                                                                                                                                                                 ;signal error condition
                                                                                            calls
                                                                                           ret
                                                                                                                                                                 :return
                                                                                            .end
```

PL

PL

Sy

RI

SI

SY

PS

--

\$4

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In

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Sy

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Th 44 Th

43

Ma

-

10

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Th

MA

PLISPUTLISTITEM Psect synopsis 16-SEP-1984 02:24:21 VAX/VMS Macro V04-00 Page 8 (1)

! Psect synopsis !

PSECT name Allocation PSECT No. Attributes ABS 00000000 0.) NOPIC LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE EXE WRT NOVEC BYTE SABS\$ FFFFFFC NOPIC USR CON ABS LCL NOSHR RD _PLI\$CODE 00000171 CON SHR RD NOWRT NOVEC LONG USR LCL

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	12	00:00:00.08	00:00:00.29
Command processing	12 74 251	00:00:00.62	00:00:01.95
Pass 1 Symbol table sort	231	00:00:01.34	00:00:02.66
Symbol table sort Pass 2	0 59 10	00:00:01.62	00:00:03.81
Symbol table output Psect synopsis output	10	00:00:00.08	00:00:00.28
Cross-reference output	407	00:00:00.00	00:00:00.00
Assembler run totals	407	00:00:13.24	00:00:28.65

The working set limit was 1050 pages.
51576 bytes (101 pages) of virtual memory were used to buffer the intermediate code.
There were 50 pages of symbol table space allocated to hold 972 non-local and 8 local symbols.
304 source lines were read in Pass 1, producing 11 object records in Pass 2.
18 pages of virtual memory were used to define 16 macros.

! Macro library statistics !

Macro Library name

Macros defined

_\$255\$DUA28:[PLIRTL.OBJ]PLIRTMAC.MLB;1 \$255\$DUA28:[SYSLIB]STARLET.MLB;2 TOTALS (all libraries)

6 7 13

995 GETS were required to define 13 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=TRACEBACK/LIS=LIS\$:PLIPUTLIS/OBJ=OBJ\$:PLIPUTLIS MSRC\$:PLIPUTLIS/UPDATE=(ENH\$:PLIPUTLIS)+LIB\$:PLIRTM

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